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Editorial

Job Design for Human and Organisational Sustainability in the Context of Emerging Technologies

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1. Introduction

This Special Issue of *Sustainability* is dedicated to highlighting theoretical knowledge and recent empirical evidence on the arrangement and implementation of job design, while addressing the context of emerging technologies and striving to ensure human and organisational sustainability.

In recent years, rapid technological advancements have induced substantial changes to work; this is sometimes referred to as the changing world of work. Evidence from various industries demonstrates that a growing number of organisations have recently been adapting and using emerging technologies in search for shorter production times, lower costs, expanded production/service capacity, and ultimately improved competitiveness. Rapid growth in the use of AI, robots, smartphones, and other technologies enables organisations to not only automate simple and repetitive tasks, such as factory operations and numerous back-office duties; it also opens new avenues for making complex decisions quickly and more accurately via predictive algorithms. Moreover, emerging technologies are increasingly used to arrange and implement more flexible working practices in terms of remote, virtual, and gig work. Given this, the changes in job design, which refer to the content and organisation of one's work activities, tasks, responsibilities, and relationships, are more than evident. More specifically, the characteristics of job design in terms of task characteristics (e.g., autonomy and task significance), knowledge characteristics (e.g., job complexity and skill variety), social characteristics (e.g., feedback and social support), and work context characteristics (e.g., work conditions and ergonomics) have been changing as a result of the intensive adoption of emerging technologies in work-related settings.

Previous literature has supported the notion that these changes might elicit a dual (positive and negative) effect on employees as well as on business, either diminishing or, on the contrary, enhancing human and organisational sustainability. Notwithstanding the foregoing, a considerable number of questions need more attention from a scientific point of view, as well as from practitioners' point of view.

The five manuscripts published in this Special Issue address several areas of interest to the academia, namely areas related to technologies, safety at work, workplace accidents, job insecurity, and job design.

2. Articles

The main motivation behind the paper by Negulescu et al. [1] lies in the notion that it is not enough to only define an effective approach to greening an organisation—managers and leaders need effective tools or frameworks to monitor and control the implementation of the proposed approach. The authors argue that there are many obstacles in the way of achieving true sustainability, such as resistance to change, lack of system thinking, or inability to ensure sustainable behaviours among suppliers. However, the unpredictability of their external environment facilitates businesses to take up particular initiatives and actions while considering social, environmental, and economic aspects. This paper aims to bring a theoretical and applied contribution to sustainable development management. As a result,

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Citation: Stankevičiūtė, Ž. Job Design for Human and Organisational Sustainability in the Context of Emerging Technologies. *Sustainability* **2023**, *15*, 4438. https://doi.org/10.3390/su15054438

Received: 27 February 2023
Accepted: 28 February 2023
Published: 2 March 2023

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a conceptual model for green companies based on an integrated management strategy and a complex assessment model (LeadSUS assessment methodology) are proposed. Finally, three case studies validate the proposed approach.

The paper by Niu and Zhao [2] explores the mining industry, arguing that the advancement of digital technology has changed the work design and the work of miners. In the new production model, the focus has changed from workers' manual manipulation to integrated computer control. However, previous studies have shown that human errors are still the main cause of accidents, and, accordingly, a smart mine is considered a safety-critical area. Based on the attitude–behaviour process model, this paper introduces two variables, namely situational awareness and task complexity, from the perspectives of human–situation interaction and human–machine interaction and establishes a moderated mediation model to thoroughly explore the mechanisms and limiting conditions of the role of safety attitudes in human errors. Using time-lagged data from 246 full-time miners working in smart mines, this paper demonstrates that individual safety attitudes can effectively reduce human errors through the partially mediating role of situational awareness, whereas task complexity plays a moderating role in the relationship between safety attitudes and situational awareness. The authors call for business to treat safety issues from a complex point of view and conduct safety attitude tests when recruiting the right employees for safety-critical positions.

Similar to the paper by Niu and Zhao, the paper by Draghici et al. [3] also deals with workplace accidents and occupational health and safety issues. This paper explores the mediating effect of a safety climate on the relationship between transformational leadership and safety behaviour. The results demonstrate that safety climate has a partial mediating effect on the relationship between transformational leadership and safety behaviour. In addition, the results reveal that transformational safety leadership has a significant influence on employees' perceptions of safety climate and plays an important role in occupational safety-related behaviours. As such, this paper encourages business people to exhibit transformational leadership, considering that such leadership style is beneficial for the safety climate in organisations and can lead to a lower number of work accidents.

The paper by Vasiliauskienė and Vasiliauskas [4] refers to indoor workplace quality. The authors argue that employees spend most of their time indoors; therefore, to ensure employee health, more attention should be devoted to addressing indoor air pollution. Indoor air may be more polluted than outdoor air when anthropogenic sources, such as copiers, laser printers, and other electrical devices that produce ozone or aerosol particles, are present indoors. This research was carried out in a copying room by recording chemical (ozone and aerosol particles) and physical (noise) environmental pollution. The results lead to the conclusion that the distribution of ozone and aerosol particles in the copying room is mostly determined by the intensity of copying. Such findings suggest that workplace designers should rethink the setup of workplaces.

Drawing on the notion that changes in a company are inevitable, the paper by Valackienė et al. [5] tackles the issues of change management and employees' sense of security, including whether employees feel safe about their workplace, income, or future roles in their company in the face of potential changes. The main goal of this paper is to describe the principal aspects of employee engagement during the change management processes. The authors proposed a theoretical matrix of change implementation in a company, which consists of six connected dimensions and seeks to emphasise cyclicality, i.e., a continuous process of change implementation.

3. Future Research Perspectives

In summary, this Special Issue provides insights as well as opens new avenues for future research in the field of technological impact on work design, while striving for sustainability. It should be recognised that researchers and practitioners should combine their efforts when rearranging job design in the context of emerging technologies, considering

that only united/combined expertise in technologies and management fields can bring value for employees and organisations.

Acknowledgments: The author would like to extend sincere thanks to the authors and the institutions participating in this Special Issue.

Conflicts of Interest: The author declares no conflict of interest.

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